CLAIMS

1. Vibration gyro circuitry comprising:

a differential amplifier circuit for outputting a signal corresponding to a difference between output signals of two detection pieces of a vibration gyro;

a synchronous detection circuit for performing synchronous detection on the output signal of the differential amplifier circuit; and

a phase shift circuit for supplying to the synchronous detection circuit a signal, as a timing signal for the synchronous detection, which is phase-shifted with respect to a drive signal supplied to the vibration gyro,

wherein the phase difference between the drive signal and the timing signal is set on the basis of a phase difference characteristic of a detection sensitivity for the output signal of the differential amplifier circuit, the phase difference characteristic being obtained in advance under a condition where a rotational angular velocity is applied to the vibration gyro in a driving state.

2. The vibration gyro circuitry of claim 1,

wherein the phase shift circuit includes an integrating circuit having a resistor and a capacitor, the integrating circuit being input with the drive signal and delaying the

drive signal by the phase difference determined by time constants of the resistor and the capacitor.

3. A vibration gyro unit comprising:

a vibration gyro having two detection pieces;

a differential amplifier circuit for outputting a signal corresponding to a difference between outputs of the detection pieces;

a synchronous detection circuit for performing synchronous detection on the output signal of the differential amplifier circuit; and

a phase shift circuit for supplying to the synchronous detection circuit a signal, as a timing signal for the synchronous detection, which is phase-shifted with respect to a drive signal supplied to the vibration gyro,

wherein the phase difference between the drive signal and the timing signal is set on the basis of a phase difference characteristic of a detection sensitivity for the output signal of the differential amplifier circuit, the phase difference characteristic being obtained in advance under a condition where a rotational angular velocity is applied to the vibration gyro in a driving state.

4. The vibration gyro unit of claim 3,

wherein the phase shift circuit includes an integrating

circuit having a resistor and a capacitor, the integrating circuit being input with the drive signal and delaying the drive signal by the phase difference determined by time constants of the resistor and the capacitor.

5. A method for detecting a vibration gyro output, in which synchronous detection is performed on a signal corresponding to a difference between output signals of two detection pieces of a vibration gyro, using a timing signal which is phase-shifted with respect to a drive signal supplied to the vibration gyro, so that a rotational angular velocity applied to the vibration gyro is detected,

wherein the phase difference between the drive signal and the timing signal is set on the basis of a phase difference characteristic of a detection sensitivity for the signal corresponding to the difference between the output signals of the detection pieces, and the synchronous detection is performed using the timing signal which is phase-shifted by the set phase difference with respect to the drive signal.

6. The method for detecting a vibration gyro output of claim 5,

wherein the phase difference is set by adjustment of a resistance of a resistor included in an integrating circuit

having the resistor and a capacitor, the integrating circuit being input with the drive signal and delaying the drive signal.

7. The method for detecting a vibration gyro output of claim 5,

wherein the phase difference is set by adjustment of a capacitance of a capacitor included in an integrating circuit having a resistor and the capacitor, the integrating circuit being input with the drive signal and delaying the drive signal.